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वस्त्रादि — पगड़ी व पग के लिये सूती कपड़ा  
— विशिष्टि  
( पहला पुनरीक्षण )

**Textiles — Cotton Cloth for *PAGRIS*  
and *PUGS* — Specification**  
( *First Revision* )

ICS 59.080.30

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## FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Man-Made Fibres, Cotton and their Products Sectional Committee had been approved by the Textiles Division Council.

This standard is based on IND/TC/0016 'Cloth, cotton for pagris and pags', issued by the Ministry of Defence, Government of India. This standard was originally published in 1973 and has been revised to incorporate the following changes:

- a) All Amendments have been incorporated.
- b) Tolerances of ends/dm and picks/dm have been modified.
- c) BIS certification marking clause has been modified.
- d) References to Indian Standards have been updated.
- e) Sampling plan has been modified.

The composition of the Committee responsible for the formulation of this standard is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard*  
**TEXTILES — COTTON CLOTH FOR *PAGRIS* AND *PAGS* —**  
**SPECIFICATION**  
*( First Revision )*

**1 SCOPE**

**1.1** This standard prescribes constructional details and other particulars of cotton cloth, bleached or dyed for *PAGRIS* and *PAGS*.

**1.2** This standard does not specify the general appearance, feel, etc, of the cloth (*see also 4.3*).

**2 REFERENCES**

**2.1** The standards listed in Annex A contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standards indicated in Annex A.

**3 MANUFACTURE**

**3.1** The cloth shall be evenly and firmly woven employing plain weave and shall be reasonably free from weaving defects.

**3.2** The white cloth shall have a full bleached finish.

NOTE — The desired whiteness of the cloth would be achieved only by imparting full bleached finish free from any bluing/whitening agents, if desired by the buyer.

**3.3** The dyed cloth shall be dyed to the required shade using appropriate dyes. The dyed fabric shall be free from stains, streaks, patches, etc.

**4 REQUIREMENTS**

**4.1 Construction** — The cloth shall comply with the requirements specified in Table 1 excepting the count of warp and weft which have been given only for guidance.

**4.2** Chemical and other requirements of the cloth shall be as given in Table 2.

Table 1 Constructional Particulars of *PAGRIS* and *PAGS*

(Clause 4.1)

Variety No.	Approximate Count of Yarn (Cotton Count (tex))		Ends per cm	Picks per cm	Mass g/m <sup>2</sup>	Breaking Strength on 5 × 20 cm Strip, N (kgf), <i>Min</i>		Length, m, <i>Min</i>	Width, cm
(1)	Warp (2)	Weft (3)	(4)	(5)	(6)	Warp (7)	Weft (8)	(9)	(10)
1	30s (20)	30s (20)	30	22	105	310 (32)	160 (16)	5.5 for <i>PAGRIS</i> 81 and 4.5 for <i>PAGS</i> or multiples thereof	
2	80s (7.4)	80s (7.4)	30	25	40	190 (20)	110 (11)	– do –	115
Tolerance, Percent	—	—	+ 5 – 2.5	+ 5 – 2.5	+ 5 – 2.5	—	—	—	± 2
Method of Test	—	—	← IS 1963 →		IS 1964	← IS 1969 (Part 1) →		← IS 1954 →	

**Table 2 Chemical Requirements of *PAGRIS* and *PAGS***  
(Clause 4.2)

Sl No.	Characteristic	Requirement	Method of Test
(1)	(2)	(3)	(4)
i)	Colour fastness to light (Dyed fabrics only) ( <i>see</i> Notes 1 and 2)	5 or better	IS/ISO 105-B01 or IS/ISO 105-B02
ii)	Colour fastness to washing (Dyed fabrics only) ( <i>see</i> Note 3)	4 or better	IS/ISO 105-C10 [Test Number A (1)]
iii)	Colour fastness to bleaching (Dyed fabrics only)	4 or better	IS/ISO 105-N01
iv)	Colour fastness to rubbing (Dyed fabrics only) i) Dry ii) Wet	4 or better	IS/ISO 105-X12
v)	Scouring loss, percent, <i>Max</i>	2.0	IS 1383 (Mild method)
vi)	<i>pH</i> value	6.0 to 8.5	IS 1390
vii)	Water solubles, percent, <i>Max</i> (for bleached cloth only)	1.0	IS 3456
viii)	Ash content, percent, <i>Max</i> (after removal of water soluble matter)	0.5	IS 199

#### NOTES

- 1 In case of dispute, the colour fastness to light shall be determined by the method prescribed in IS/ISO 105-B01.
- 2 For olive green shade used for defence purposes, the requirement for colour fastness to light shall be 6 or better.
- 3 For olive green shade used for defence purposes, the requirement for colour fastness to washing shall tested under conditions of test number E(5).

**4.3 Sealed Sample** — If, in order to illustrate, indeterminable characteristics such as general appearance, lustre, feel and shade

of the cotton cloth, sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

**4.3.1** The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

## 5 MARKING

**5.1** The cloth shall be marked with the following:

- a) Name of the material;
- b) Width and length of the piece;
- c) Manufacturer's name, initials or trade-mark, if any; and
- d) Year of manufacture.

### 5.1.1 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed

thereunder, and the product(s) may be marked with the Standard Mark.

## 6 PACKING

The cloth shall be packed in bales or cases in conformity with the procedure laid down in IS 1347 or in IS 293, as required.

## 7 SAMPLING

**7.1** For determining the conformity in respect of the physical characteristics, namely, ends and picks, mass per square metre, breaking load, width and length, the scale of sampling and the criteria for conformity as given in IS 3919 shall be followed.

**7.2** For ascertaining the conformity in respect of chemical requirements (*see* Table 2), the scale of sampling and criteria for conformity as given in IS 5463 shall be followed.

**ANNEX A**  
(Clause 2.1)

**LIST OF REFERRED INDIAN STANDARDS**

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
199 : 1989	Textiles — Estimation of moisture, total size or finish, ash and fatty matter in grey and finished cotton textile materials ( <i>third revision</i> )		force and elongation at maximum force using the strip method ( <i>fourth revision</i> )
293 : 1980	Code for seaworthy packaging of cotton yarn and cloth ( <i>third revision</i> )	3456 : 2022	Method for determination of water soluble matter of textile materials ( <i>first revision</i> )
1347 : 1972	Specification for inland packaging of cotton cloth and yarn ( <i>first revision</i> )	3919 : 1966	Methods for sampling cotton fabrics for determination of physical Characteristics ( <i>first revision</i> )
1383 : 1977	Methods for determination of scouring loss in grey and finished cotton textile materials ( <i>first revision</i> )	5463 : 2022	Methods for sampling of cotton fabrics for chemical tests
1390 : 2022	Textiles — Determination of pH of aqueous extract ( <i>third revision</i> )	IS/ISO 105-B01 : 2014	Textiles — Tests for colour fastness — Part B01 Colour fastness to light: Daylight
1954 : 1990	Determination of length and width of woven fabrics — Methods ( <i>second revision</i> )	IS/ISO 105-B02 : 2014	Textiles — Tests for colour fastness — Part B02 Colour fastness to artificial light: Xenon arc fading lamp test
1963 : 1981	Methods for determination of threads per unit length in woven fabrics ( <i>second revision</i> )	IS/ISO 105-C10 : 2006	Textiles — Tests for colour fastness Part C10 Colour fastness to washing with soap or soap and soda
1964 : 2001	Textiles — Methods for determination of mass per unit length and mass per unit area of fabrics ( <i>second revision</i> )	IS/ISO 105-N01 : 1993	Textiles — Tests for colour fastness Part N01 Colour fastness to bleaching: Hypochlorite
1969 (Part 1) : 2018	Textiles — Tensile properties of fabrics — Part 1 Determination of maximum	IS/ISO 105-X12 : 2016	Textiles — Tests for colour fastness Part X12 Colour fastness to rubbing ( <i>first revision</i> )

**ANNEX B***(Foreword)***COMMITTEE COMPOSITION**

Man-Made Fibers, Cotton and their Products Sectional Committee,  
TXD 31

<i>Organization</i>	<i>Representative(s)</i>
ICAR – Central Institute for Research on Cotton Technology, Mumbai	DR P K MANDHYAN ( <i>Chairman</i> )
Ahmedabad Textile Industry's Research Association, Ahmedabad	SHRIMATI DEEPALI PLAWAT SHRI JIGAR DAVE ( <i>Alternate</i> )
Association of Synthetic Fibre Industries, New Delhi	SHRI M. S. VERMA
AYM Syntex Ltd, Dadra and Nagar Haveli	SHRI ARNAB SAMANTHA SHRI SAUGATA DAS ( <i>Alternate</i> )
Confederation of Indian Textile Industry, New Delhi	SHRI D. K. NAIR SHRI SHAJU MANGALAM ( <i>Alternate</i> )
Consumer Guidance Society of India, Mumbai	DR SITARAM DIXIT DR M. S. KAMATH ( <i>Alternate</i> )
Cotton Association of India, Mumbai	SECRETARY
Defence Materials and Stores Research and Development Establishment, Kanpur	SHRI ASHOK KUMAR YADAV SHRI BISWA RANJAN DAS ( <i>Alternate</i> )
Grasim Industries Limited, Vadodara	SHRI AJAY SARDANA DR ROHITASVA KUMAR ( <i>Alternate</i> )
ICAR – Central Institute for Research on Cotton Technology, Mumbai	DR SENTHIL KUMAR DR A. ARPUTHARAJ ( <i>Alternate</i> )
JCT Limited, Phagwara	SHRI KHUSHWINDER SINGH DHILLON SHRI ARWINDER SINGH ( <i>Alternate</i> )
North India Textile Mills Association, Chandigarh	SHRI SANJAY GARG SHRI SIDHARTHA KHANNA ( <i>Alternate</i> )
Northern India Textile Research Association, Ghaziabad	SHRI SANJEEV SHUKLA SHRIMATI NEHA KAPIL ( <i>Alternate</i> )
Office of Textile Commissioner, Mumbai	SHRI SOURABH KULKARNI SHRI PRANAV PARASHAR ( <i>Alternate</i> )



## IS 7119 : 2022

<i>Organization</i>	<i>Representative(s)</i>
Reliance Industries Limited, Mumbai	SHRI AJAY GUPTA SHRI KESHAV P PAAREEK ( <i>Alternate</i> )
Textile Committee, Mumbai	SHRI J. D. BARMAN SHRI P. N. S. SIVAKUMAR ( <i>Alternate</i> )
The Bombay Textile Research Association, Mumbai	SHRI R. A. SHAIKH SHRIMATI PRAGATI KULKARNI ( <i>Alternate</i> )
The Cotton Corporation of India Ltd, Navi Mumbai	SHRI P. N. PILLEWAR SHRI V. K. SINHA ( <i>Alternate</i> )
The Cotton Textile Export Promotion Council, Mumbai	SHRI SIDDARTHA RAJGOPAL
The Southern India Mills Association, Coimbatore	SHRI D. SURESH ANAND KUMAR
The Synthetic & Rayon Textile Export Promotion Council, Mumbai	SHRI S. BALARAJU
The Synthetic and Art Silk Mills Research Association, Mumbai	DR MANISHA MATHUR SHRIMATI ASHWINI A SUDAM ( <i>Alternate</i> )
Veermata Jijabai Technological Institute, Mumbai	DR (SMT) SURANJANA GANGOPADHYAY
In personal capacity ( <i>D-618, Maruti Paradise, Sector - 15, CBD-Belapur, Navi Mumbai - 400614.Maharashtra.</i> )	SHRI A. SATHEESAN
BIS Directorate General	SHRI J. K. GUPTA, Scientist E and Head (Textiles) [Representing Director General ( <i>Ex-officio</i> )]

*Member Secretary*  
SHRI MAYUR KATIYAR  
Scientist 'B' (Textiles), BIS

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### Amendments Issued Since Publication

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